

EXHIBIT 38

DECLARATION OF KIRK DOMBROWSKI, UNIVERSITY OF VERMONT

I, Kirk Dombrowski, declare as follows:

1. I am the Vice President for Research and Economic Development at the University of Vermont (the “University”) in Burlington, Vermont. I have held that position since April 2, 2020. Over the course of my career I have been both a researcher and research administrator and have received research funding support from the National Science Foundation, the National Institutes of Health, the National Institute for Agriculture at the US Department of Agriculture, and I have served as the State EPSCoR Director for Vermont.

2. I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by University of Vermont personnel, and could testify thereto.

3. The University of Vermont receives substantial annual funding from the National Science Foundation (“NSF”). Our research portfolio includes 89 active NSF grant awards totaling \$52.7 million and one \$3.3 million cooperative agreement, which together include \$41.8 million in direct and \$14.2 million in indirect costs. In the last year, we have received \$10.3 million in new funding from NSF.

4. The University of Vermont intends to apply for new funding awards, and/or renewals and continuations of existing funding awards, in the next year and in future years to come. We currently have 78 NSF proposals pending, with additional proposals in development, in the areas of artificial intelligence, computer science, mechanical, electrical and environmental engineering, chemistry, biological sciences, and geosciences.

5. The funding that the University of Vermont receives from NSF supports critical and cutting-edge research vital to our nation’s security, drives American innovation in key

industries, strengthens US infrastructure, and improves quality of life. Millions of Americans benefit from and depend on this research. For example:

- a. The University's work on electrical grid systems is developing novel state-of-the-art computational and engineering tools to solve large-scale power grid challenges that will increase the reliability, affordability and security of power distribution systems and protect against catastrophic system failures caused by mechanical failure, natural disasters or sabotage by malign actors.
- b. NSF-funded research at the University of Vermont is integrating advanced wireless technology, AI-enabled control systems and micro-robotics to replace costly and failure-prone hardware embedded within bridges, underground piping, dams, buildings, and other major engineering infrastructure. This technology will better identify, diagnose and mitigate structural problems, improving construction and maintenance outcomes and leading to more timely and effective emergency response and adaptive control in response to extreme weather and other adverse events.
- c. The University of Vermont's chemistry researchers are advancing novel methodologies for production of organic compounds essential for agricultural, biomedical, and consumer product applications. These next-generation approaches are more efficient and minimize the use of hazardous materials, improving the safety of workers and consumers. NSF funding has been critical in advancing this technology across the entire innovation life cycle, from fundamental research to development of viable marketplace technologies for domestic production of value-added products.

d. NSF-funded artificial intelligence work at the University of Vermont is leveraging the power of large-language models (“LLMs”) to reveal higher-order sentiment and meaning from narrative material. This work has direct applications for improving healthcare delivery, with newly-developed tools for improving doctor-patient relationships, assisting patients with cognitive-communication impairments, and enhancing mental health care and crisis prevention, an area of acute need for veterans and trauma survivors.

6. Reimbursement of the University of Vermont’s indirect costs is essential for supporting this research. NSF’s cutting of indirect cost rates to 15% would preclude carrying out the kinds of research projects described in paragraph 5 in the future.

7. Indirect costs include constructing and maintaining state-of-the-art laboratories and research facilities that meet the exacting requirements of science and technology research, including modern, precision instrumentation required for research design, prototype fabrication, sample detection and measurement, computational analyses, and quality control and validation. Without this critical infrastructure, we simply cannot conduct the research. This infrastructure, vital to the ability to complete the research, cannot be charged directly to grants by virtue of rules established by the White House Office of Management and Budget.

8. For example, with respect to the research projects described in Paragraph 5:

a. To support advanced power systems research, the University of Vermont has constructed a new Accelerated Testing Laboratory for development and testing of advanced energy system control and optimization technologies, paired with an off-campus Hybrid Solar Test Center that serves as an innovation testbed for validation studies.

- b. Advanced chemistry research requires shared instrumentation facilities for analyzing chemical structures and composition. For example, the University of Vermont procured and supports the maintenance contracts and staffing for two high field nuclear magnetic resonance spectrometers made available to faculty, staff and graduate students for research activities.
- c. LLM and AI-enabled research requires high-performance computing resources over and above typical High-Performance Computing (“HPC”) cluster capacity, with specialized graphics processing units and storage that are compatible with AI requirements, along with significant architectural and room-level capacity, power and cooling upgrades. HPC computing systems typically require significant hardware upgrades every 6-8 years, with annual incremental investments into processing, memory, and storage capacity. Such research also requires significant new investment into cybersecurity hardware under implementation of National Security Presidential Memorandum 33.

9. Physical facilities costs are one of the largest components of indirect costs. This includes not only the usual costs of constructing and maintaining buildings where research occurs, but the very high costs of outfitting and maintaining specialized laboratory space, which can require special security, advanced HVAC systems, acoustic and vibrational insulation systems, and specialized plumbing, electrical systems and waste management, as well as specialized laboratory equipment. The University of Vermont has invested significantly within the last 10 years in building construction and renovation to support cutting-edge chemistry, physics and engineering research. The features and amount of space available to researchers have a direct and obvious impact on the nature and amount of research that can be done at the University of Vermont.

Completion of in-progress facilities projects, such as a new Next-Generation Energy Systems “digital twin” simulation testbed designed to further the power systems research described in paragraph 5, will be at risk of significant curtailment under a 15% indirect cost rate.

10. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NSF. These mandates serve many important functions, including ensuring research integrity; protecting research subjects; properly managing and disposing of chemical and biological agents and other materials used in research; managing specialized procurement and security requirements for sensitive research; managing funds; preventing technologies and other sensitive national security information from being inappropriately accessed by foreign adversaries; providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data; ensuring compliance with specialized security protocols and safety standards; maintaining facility accreditation and equipment calibration to meet research quality and security standards; and preventing financial conflicts of interest.

11. Recovery of the University of Vermont’s indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

12. Through fiscal year 2026, the predetermined indirect cost rates for on-campus research is 53.5% for basic research, 49.% for the Agricultural Experiment Station, and 21% for Extension Service.

13. The effects of a reduction in the indirect cost rate to 15% would be devastating. Of the \$56 million in active NSF funding awarded to the University of Vermont, approximately \$41.8 million consists of payment of direct costs, and \$14.2 million consists of reimbursement of indirect costs. If we break the total grant awards down by budget year, the University of Vermont expects

to receive \$10.9 million in NSF funding for direct costs and \$3.7 million in NSF funding for indirect costs in fiscal year 2025. Over the next five years, the University of Vermont anticipates receiving an average of \$11 million annually from the NSF for direct costs, for a total of \$55 million over five years. Based on the predetermined indirect cost rate of 53.5%, which was agreed upon by the federal government as of 05/01/2024 and applying that rate to the direct costs (as modified pursuant to the CFR), the University of Vermont reasonably expects to receive approximately \$19.7 million in indirect cost recovery from NSF over the next five years.

14. If—contrary to what the University of Vermont has negotiated with the federal government—the indirect cost rate was reduced to 15% for new awards, that would significantly reduce the University of Vermont’s anticipated annual indirect cost recovery. For example, applying the 15% rate to the anticipated modified direct costs over the next five years, the University of Vermont’s anticipated annual indirect cost recovery would be reduced by \$2.8 million: from \$3.9 million each year to \$1.1 million a year.

15. This reduction would have deeply damaging effects on the University of Vermont’s ability to conduct research from day one. Many of the University of Vermont’s current research projects will be forced to slow down or cease if forced to apply for renewals at the 15% indirect cost cap. This will also necessarily and immediately result in staffing reductions. For example:

- a. Twelve NSF-funded researchers whose current funding will end in calendar year 2025 currently have proposals to continue their work pending, totaling \$7.5 million in direct costs. Receiving an award is essential to continue their research programs, retain current technical staff in their laboratories, and support graduate student trainees. In the absence of funding, these researchers will be forced to wind down research activities and terminate their long-time

lab managers and technicians. Recruiting staff who have the requisite knowledge and experience, to work on such projects is exceedingly difficult. Even if funding were later restored, it would be difficult to find qualified individuals to fill these positions.

- b. Salaries of essential support staff would immediately be jeopardized by a loss of indirect cost recovery; in the College of Engineering and Mathematical Sciences alone, three technical building staff and two machine shop staff are supported by indirect cost recovery. Reductions would delay equipment repairs and reduce the hours and services for in-house design and fabrication. These services are fundamental for facilitating scientific progress.

16. The University of Vermont has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, the University of Vermont has long-term obligations, such as funding assurances to newly-admitted PhD students and service contracts for research equipment for which it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments. This multi-year budgeting process also assumes the availability or possibility of grant renewals at roughly similar terms – at the negotiated indirect cost rate – as had been previously available.

17. In addition to the immediate effects and reliance interests described above, dramatically cutting indirect cost reimbursement would have longer-term effects that are both cumulative and cascading. Deferred maintenance degrades research facilities and equipment, with escalating costs over time. Reduced revenues to core facilities across campus, from flow cytometry to animal care to technical services, would lead to progressively fewer services provided and ultimately closure, constraining the research capacity of the university. Reductions in personnel will place increasing workload burdens on remaining staff in offices of research protection, environmental safety, and grant administration, lowering service quality, lowering overall safety, and increasing staff turnover. These impacts would reduce opportunities to conduct research at the University of Vermont in ways that would be difficult or impossible to redress even if funding were restored. Ultimately, the university may lose top scientists if we cannot provide the environment necessary to conduct world-class research.

18. Disruptions to the University of Vermont's research will also have negative effects in the Burlington area, the state of Vermont, and the broader region. A total of 5,303 Vermont residents are directly employed by the University of Vermont—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. The University of Vermont's research also fuels spending in the regional economy, including by driving discoveries that launch new business and technology ventures, attract private investment, and make a positive social impact. A massive reduction in the University of Vermont's research budget would immediately and seriously jeopardize these contributions to the local region.

19. Finally, slowdowns or halts in research by the University of Vermont and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security

and its economic dominance. Discoveries and advances by University of Vermont researchers over the past several years, enabled by NSF financial support, have contributed significantly to US leadership in advanced manufacturing, semiconductor materials science, solar and battery technology, bio-inspired materials, and robotics—all fields in where the University of Vermont plays a significant national role. Losing these research innovations, and the researchers whose work produced them, will set back US dominance in these industries.

20. The University of Vermont cannot cover the funding gap itself. While the University of Vermont maintains a modest endowment, it is neither feasible nor sustainable for the University of Vermont to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery:

- a. The majority of the University of Vermont's endowment—approximately 90%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. The University of Vermont is not legally permitted to use those funds to cover research infrastructure costs.
- b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically 4.5%, to ensure long-term financial stability for the institution.

22. It is also not feasible or sustainable for the University of Vermont to use other revenue sources to offset shortfalls in indirect cost recovery. As a non-profit institution, the University of Vermont reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, the University of Vermont does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for

students. Absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on the University of Vermont which would in turn force reductions in key investments supporting the University of Vermont's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain the University of Vermont's academic excellence. Even if the University of Vermont could "cover" some of the indirect costs previously funded by NSF in the short term, it could do so only by negatively affecting other critical goals central to the institution's mission during that same period.

23. If the University of Vermont can no longer apply for NSF grants because it is unable to accept the new indirect cost rate cap –the harms described herein would be exacerbated. The University of Vermont cannot "float" all of the indirect costs it would likely lose coverage for, nor could it float NSF grants altogether if it is not able to accept the 15% cap. As a result, many researchers, starting with the 78 pending NSF proposals, would need to terminate some projects altogether due to loss of their primary funding source, and others would need to be scaled down or pared back indefinitely. The process of identifying cuts would need to begin immediately, and layoffs and research pauses or contractions would follow soon thereafter. Cutting back on the University of Vermont and others' research in fields such as engineering, physics, materials science, computer science, molecular biology and geological sciences will have long-term implications on national security and the American economy.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 5, 2025 at Burlington, Vermont.

A handwritten signature in black ink, appearing to read "Kirk Dombrowski", is written over a horizontal line.

Kirk Dombrowski, PhD
University of Vermont